

WHAT IS CLAIMED IS:

1. A method for routing data frames to a bridge port in a bridge
device having a shared forwarding database, the method
5 comprising:
creating an entry in the shared forwarding database, the
entry indicating that data addressed to an address should be source
routed;
receiving a data frame addressed to the address;
10 determining that the data frame requires source routing
based on the entry in the shared forwarding database;
reading source routing data from the data frame;
identifying a port corresponding to the source routing data;
and,
15 sending the data frame to the identified port.
2. The method of claim 1 wherein the data frame comprises a VLAN
tag and reading source routing data from the data frame comprises
reading the VLAN tag.
- 20 3. The method of claim 2 wherein each of the ports is associated with
a port VLAN identifier and identifying a port corresponding to the
source routing data comprises identifying a port having a port
VLAN identifier which is the same as a VID from the VLAN tag.
- 25 4. The method of claim 1 wherein the address comprises a MAC
address of a device and determining that the data frame requires

source routing comprises looking up the MAC address in the shared forwarding database.

5 5. The method of claim 1 comprising applying one or more inbound rules to the data frame before determining that the data frame requires source routing.

10 6. The method of claim 5 comprising applying one or more outbound rules to the data frame after identifying a port corresponding to the source routing data.

15 7. The method of claim 1 comprising applying one or more outbound rules to the data frame after identifying a port corresponding to the source routing data.

20 8. The method of claim 1 wherein identifying a bridge port corresponding to the source routing data comprises identifying a bridge port having a port VLAN identifier equal to a VID specified in the VLAN tag.

9. The method of claim 8 comprising receiving data at the bridge port and tagging the data with a VLAN tag comprising a VID determined by the port VLAN identifier.

25 10. The method of claim 1 wherein identifying a bridge port corresponding to the source routing data comprises identifying a bridge port having a port VLAN identifier corresponding to a VID

specified in the VLAN tag according to a correspondence maintained in the bridge.

5 11. The method of claim 10 comprising receiving data at a bridge port and tagging the data with a VLAN tag comprising a VID equal to a port VLAN identifier associated with the bridge port according to the correspondence maintained in the bridge.

10 12. The method of claim 1 comprising:
receiving data from the address;
determining that data sent to the address requires source routing based on the entry in the shared forwarding database; and, not dynamically updating the entry in the shared forwarding database in response to determining that data sent to the address
15 requires source routing.

20 13. A bridge comprising:
a plurality of bridge ports;
a shared forwarding database, the shared forwarding database comprising a plurality of first records, each first record associating an address with one of the bridge ports, and at least one second record, the second record associating an address with information indicating that data sent to the address of the second record requires source routing;
25 the bridge being configured to respond to receipt of data addressed to the address of the second record by:

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forward the data to one of the bridge ports based upon the source routing information.